

CLAIMS

1. An apparatus for loading containers with bags, such as for instance bags or netting packages of fruit or bags of potatoes and other sensitive products, wherein the apparatus is provided with a feed conveyor assembly and a loading unit, wherein the apparatus is provided with a control designed for, each time, forming a layer of bags in the loading unit, which layer has dimensions substantially corresponding to the bottom dimensions of a container to be filled, and wherein the control is designed such that, each time, the loading unit places a formed layer in the container to be filled.
2. An apparatus according to claim 1, wherein the feed conveyor assembly comprises two rotating systems arranged one behind the other, wherein each rotating system comprises two parallel running conveyor belts which are drivable at different speeds.
3. An apparatus according to claim 2, wherein the control is designed to rotate a bag through an angle of 45 degrees on the first rotating system and to rotate it through an additional angle of 45 degrees on the second rotating system, wherein the control is further designed to already provide the first rotating system, during the processing of a preceding bag on the second system, with control signals for processing a following bag on the first rotating system.
4. An apparatus according to any one of the preceding claims, wherein one of the conveyors in the feed conveyor assembly is arranged so as to be movable up and down by at

least one end, so that successive bags can be placed on top of one another in an overlapping manner.

5. An apparatus according to any one of the preceding claims, wherein the feed conveyor assembly is provided with a stop against which the bags butt after the bags have been conveyed over the feed conveyor assembly in a first direction, wherein, viewed in the first conveying direction, upstream of the stop, a transfer device has been arranged by means of which a number of bags accumulated against the stop are placed onto a further conveying path of the feed conveyor assembly, wherein the said further conveying path has a second conveying direction extending substantially perpendicular to the first conveying direction.

6. An apparatus according to claim 5, wherein the further conveying path comprises a collecting belt and a retracting belt, wherein the retracting belt is movable as a whole in the second conveying direction, such that a discharge end thereof can be introduced as a whole into the loading unit.

7. An apparatus according to claim 6, wherein, on both sides of the collecting belt, a folding side plate is arranged, which are each pivotable from a horizontal position into a vertical position.

8. An apparatus according to claim 6 or 7, wherein a discharge end of the collecting belt is arranged so as to be movable up and down, so that bags S can be placed on top of one another in an overlapping manner in the second conveying direction as well.

9. An apparatus according to any one of the preceding claims, wherein the loading unit is provided with a holder which is movable up and down, having such outer dimensions that it is substantially fittingly receivable in a container to be loaded.

10. An apparatus according to claim 9, wherein the holder is provided with an open side via which the holder is loadable from the further conveying path, wherein the bottom of the holder is formed by a flexible curtain which can be pulled away from the bottom.

11. An apparatus according to claim 10, wherein the flexible curtain comprises two curtain parts which are movable from a closed position from the middle of the bottom away from each other for removing the bottom, such that a layer of bags can be released from the middle of the holder.

12. An apparatus according to any one of claims 9-11, wherein the holder is provided with a sensor designed for observing a certain distance from the bottom of the holder to the bottom of the container or a top side of bags already present in this container.

13. An apparatus according to claim 12, wherein the sensor is a mechanical sensor, such as for instance a proximity switch.

14. An apparatus according to any one of claims 9-13, wherein, at least during a downward movement, the holder is partly carried by at least one pressure-controlled air cylinder and is partly carried by a drive by means of which the vertical position of the holder is controllable.

15. An apparatus according to any one of the preceding claims, wherein, below the loading unit, a conveying system for containers extends.

16. A method for loading a container with bags, wherein the bags are placed from a feed conveyor assembly onto a bottom of a holder of a loading unit, wherein, subsequently, when the whole bottom of the holder of the loading unit has been filled with bags, this holder is lowered into a container to be filled and the bottom is released when the bottom of the holder is just above the bottom of the container to be filled or a layer of bags present in this container.

17. A method according to claim 16, wherein the release of the bottom of the holder takes place in that this bottom is manufactured from a flexible curtain which can be pulled away for the purpose of releasing the bottom.

18. A method according to claim 16 or 17, wherein, in the feed conveyor assembly, the bags are oriented by means of two rotating systems arranged one behind the other which each comprise two parallel running conveyor belts drivable at different speeds, wherein the first rotating system rotates a bag through 45 degrees and the second rotating system rotates the bag, by then rotated through 45 degrees, again through a further 45 degrees.